

REMARKS

Reconsideration and allowance of the present patent application based on the foregoing amendments and following remarks are respectfully requested.

By this amendment, claims 1, 4 and 5 are amended and claim 8 is cancelled without prejudice or disclaimer to the subject matter therein. Support for the amendments to the claims can be found throughout the original description. No new matter has been added. Accordingly, after entry of this Amendment, claims 1 and 3-7 will remain pending in the patent application.

Claims 1 and 4-8 were rejected under 35 U.S.C. §103 (a) as allegedly being unpatentable over U.S. Patent No. 5,870,698 to Riedel *et al.* ("Riedel") in view of U.S. Pub. No. 2003/0176938 to Tuszynski ("Tuszynski"), JP 2001-145947 to Katsuta *et al.* ("Katsuta") and U.S. Pub. No. 2004/0148136 to Sasaki *et al.* ("Sasaki"). The rejection is respectfully traversed.

Claim 8 is cancelled without prejudice or disclaimer, thus rendering moot the rejection of this claim.

Claim 1 recites a stand-alone display device of an injection molding machine that operates in accordance with an operating condition, the display device comprising, *inter alia*, "an input unit configured to enable input of a change in the operating condition of the injection molding machine and to enable input of qualitative information corresponding to a state of an operating quality of the machine resulting from the change in the operating condition of the machine, said qualitative information indicative of quality of a product produced by the machine as a result of the change in the operating condition; a storage process unit configured to store data including history data including one or more of product data, mold numbers, resin material data or product molding conditions, the history data further including the inputted data related to the change in operating condition of the machine and the qualitative information corresponding to the state of the operating quality of the machine resulting from the change in operating condition, wherein the storage process unit is configured to record data including data indicative of product identification data indicating a product produced by the injection molding machine in accordance with the change in the operating condition and the history data corresponding to the product identification data..."

These features of claim 1 are amply supported by the embodiments provided in original disclosure. For example, one of the embodiments teach that the display device is configured to enable the user of the machine to enter qualitative information through the touch panel 4 about the change of the operating condition of the machine. As a non-limiting example, the original disclosure teaches that when the user changes the operating condition of the machine to "Flash" at time "11:07", the user can input to the machine that the state of the operating quality corresponding to the change "Flash" is "better". All this information is stored as history data which can be retrieved and displayed by the user of the machine to make decisions as to future process changes. Applicant respectfully submits that none of the cited portions of Riedel, Tuszynski, Katsuta and Sasaki discloses, teaches or suggests these aspects of claim 1.

By way of review, the cited portions of Riedel disclose a multi-purpose machine metering/monitoring apparatus that is capable of monitoring analog and digital input signals generated by the machine being monitored. See Riedel at col. 2, lines 37-40. Digital input signals are detected via optically isolated input devices that are configurable to detect counter, level, interval timing or a combination of such signals. See Riedel at col. 2, lines 43-46. The machine monitoring apparatus selectively includes a numeric or alpha-numeric keypad having a display such as a touch screen display or LCD display, allowing a machine operator to enter and/or monitor desired data, e.g. machine operator numbers, mold numbers, setup times, job status, other defined events, calibration and real-time input data including pressures, temperatures, cycle counts, cycle durations and parts counts. See Riedel at col. 2, lines 56-63.

With this said, there is nothing within the cited portions of Riedel that remotely discloses, teaches or suggests that the multi-purpose machine metering/monitoring apparatus is configured to enable ***input of qualitative information corresponding to a state of an operating quality of the machine resulting from the change in the operating condition of the machine, said qualitative information indicative of the quality of a product produced by the machine as a result of the change in the operating condition***, as required by claim 1. Unlike claim 1, the apparatus of Riedel is merely adapted to record data with various sensors, which data can then be used for future comparisons and scheduling. See Riedel at col. 7, lines 58-67. Applicant respectfully submits that the apparatus of Riedel lacks the same features as the

monitoring systems that are discussed in the background section of the present application. That is, when the user changes the operating condition of the apparatus, the apparatus of Riedel does not enable the user to input qualitative information corresponding to the state of the operating quality of the machine resulting from the change in the operating condition of the machine. As a result, it is very difficult for the user of Riedel's apparatus to appreciate the impact of the operating condition of the apparatus on the quality of the product produced by the apparatus.

The cited portions of Tuszynski, Katsuta and Sasaki fail to remedy the deficiencies of Riedel. The cited portions of Tuszynski merely teach a statistical modeling approach to determine the relationship of various input parameters with a resulting output product. See Tuszynski at paragraphs 13 and 14. The cited portions of Katsuta disclose a display device of an injection molding device. See Katsuta at Abstract. The cited portions of Sasaki disclose a management system for an injection molding apparatus. With this said, the cited portions of Tuszynski, Katsuta and Sasaki are silent as to an apparatus configured to enable the user of the apparatus to input qualitative information corresponding to a state of an operating quality of the machine resulting from the change in the operating condition of the machine, said qualitative information indicative of quality of a product produced by the machine as a result of the change in the operating condition. Therefore, any proper combination of the cited portions of Riedel, Tuszynski, Katsuta and Sasaki cannot result, in any way, in the invention of claim 1.

Claim 4 is patentable over the cited portions of Riedel, Tuszynski, Katsuta, Sasaki and any proper combination thereof for at least similar reasons as provided above for claim 1 and for the features recited therein. For example, the cited portions of Riedel, Tuszynski, Katsuta, Sasaki and any proper combination thereof do not disclose, teach or suggest a stand-alone history collecting system comprising, *inter alia*, "a communication unit configured to communicate with a display device of an injection molding machine operated in accordance with an operating condition through a communication medium, the display device including an input unit configured to enable input of a change in the operating condition of the injection molding machine and to enable input of qualitative information corresponding to a state of an

operating quality of the machine resulting from the change in the operating condition of the machine, said qualitative information indicative of quality of a product produced by the machine as a result of the change in the operating condition; a unit configured to receive data including history data including one or more of product data, mold numbers, resin material data or product molding conditions, the history data further including the inputted data related to the change in operating condition of the machine and the qualitative information corresponding to the state of the operating quality of the machine resulting from the change in operating condition from the display device using the communication unit...”

Claim 5 is patentable over the cited portions of Riedel, Tuszynski, Katsuta, Sasaki and any proper combination thereof for at least similar reasons as provided above for claim 1 and for the features recited therein. For example, the cited portions of Riedel, Tuszynski, Katsuta, Sasaki and any proper combination thereof do not disclose, teach or suggest a display device of an injection molding machine that operates in accordance with an operating condition, the display device comprising, *inter alia*, “an input unit, coupled to the display device, configured to receive an input from a user and from the injection molding machine, the input including qualitative information corresponding to a state of an operating quality of the machine resulting from the change in the operating condition of the machine, said qualitative information indicative of quality of a product produced by the machine as a result of the change in the operating condition... [and] a storage process unit configured to receive and store data including one or more of changed molding conditions of the injection molding machine, molding qualities corresponding to the changed molding conditions, and product identification data indicative of a product molded by the injection molding machine in accordance with the changed molding conditions and history data including one or more of product data, mold numbers, resin material data, to the second storage module, the history data further including the qualitative information corresponding to the state of the operating quality of the machine resulting from the change in operating condition...”

Claims 6 and 7 are patentable over the cited portions of Riedel, Tuszynski, Katsuta, Sasaki and any proper combination thereof at least by virtue of their dependency from claim 5 and for the additional features recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 1 and 4-8 under 35 U.S.C. §103 (a) as allegedly being unpatentable over Riedel in view of Tuszynski, Katsuta and Sasaki are respectfully requested.

Claims 1 and 3-8 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,461,570 to Wang *et al.* ("Wang") in view of Tuszynski, Katsuta and Sasaki. The rejection is respectfully traversed.

Claim 8 is cancelled without prejudice or disclaimer, thus rendering moot the rejection of this claim.

Claim 1 is recited above. The cited portions of Wang do not disclose, teach or suggest the aspects recited in claim 1.

By way of review, the cited portions of Wang disclose a quality control system for a contact lens manufacturing facility that automatically acquires process control data from a plurality of manufacturing process controllers that control contact lens production and that can automatically process the data for real-time display and off-line analysis purposes. See Wang at col. 1, line 64 – col. 2, lines 2. The cited portions of Wang specifically disclose a plurality of operator stations 400 including display server 404 and user interface manager 502 which are connected by a network 99 to an offline analysis node 500 and a data acquisition node 100. See Wang at Figure 1.

With this said, there is nothing within the cited portions of Wang that remotely discloses, teaches or suggests that the quality control system is configured to enable input of qualitative information corresponding to a state of an operating quality of the machine resulting from the change in the operating condition of the machine, said qualitative information indicative of the quality of a product produced by the machine as a result of the change in the operating condition. Further, as noted above, the cited portions of Tuszynski, Katsuta and Sasaki are silent as to these aspects of claim 1. Therefore, any proper combination of the cited portions of Wang, Tuszynski, Katsuta and Sasaki cannot result, in any way, in the invention of claim 1.

Claim 3 is patentable over the cited portions of Wang, Tuszynski, Katsuta, Sasaki and any proper combination thereof at least by virtue of their dependency from claim 1 and for the additional features recited therein.

Claim 4 is patentable over the cited portions of Wang, Tuszynski, Katsuta, Sasaki and any proper combination thereof for at least similar reasons as provided above for claim 1 and for the features recited therein. Similarly, claim 5 is patentable over the cited portions of Wang, Tuszynski, Katsuta, Sasaki and any proper combination thereof for at least similar reasons as provided above for claim 1 and for the features recited therein. Claims 6 and 7 are patentable over the cited portions of Wang, Tuszynski, Katsuta, Sasaki and any proper combination thereof at least by virtue of their dependency from claim 5 and for the additional features recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 1 and 3-8 under 35 U.S.C. §103 (a) as allegedly being unpatentable over Wang in view of Tuszynski, Katsuta and Sasaki are respectfully requested.

Having addressed each of the foregoing rejections, it is respectfully submitted that a full and complete response has been made to the outstanding Final Action and, as such, the application is in condition for allowance. Notice to that effect is respectfully requested.

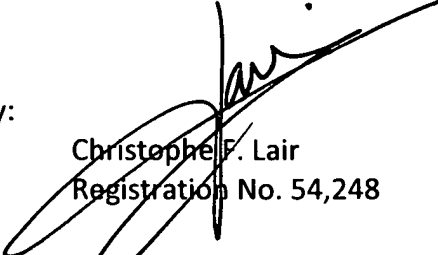
If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

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Respectfully submitted,

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